REMARKS:

Claims 80-83 were rejected under 35 USC 101 for being directed to non-statutory subject matter. It is believed that the amendment of these claims to refer to "isolated" chemokine antagonists overcomes this objection.

Claims 80-83 were rejected under 35 USC 112. Specifically, the Office Action states that "the specification does not enable a protein substantially equivalent to ... SEQ ID NO:1" and that "the specification does not teach which residues can be conservatively substituted without affecting the functional activity of the protein".

Claims 80-83 were further rejected under 35 USC 112 as vague and indefinite for reciting "substantially equivalent".

It is respectfully requested that the examiner reconsider this objection in view of the definition of "substantially equivalent" at lines 8-22 of paragraph 0005 of the application, which states that "the novel antagonist proteins also include those that are substantially equivalent (that is, those that contain amino acid substitutions, additions and deletions that do not delete the CXCR1 and CXCR2 binding functions) to a wild-type bovine CXCL8 protein...and also bear a truncation of the first two amino acid residues along with substitutions of Lys11 with Arg and Gly31 with Pro."

It is noted that the amino acid sequence of SEQ ID NO: 1 comprises a truncation of the first two amino acids of the wild type sequence, and has an Arginine residue at position 9 (position 11 of the wild-type sequence) and a Proline residue at position 29 (position 31 of the wild type sequence).

Furthermore, one of skill in the art would understand that the claimed peptide is an ELR-CXC antagonist that is substantially equivalent to the wild-type bovine CXCL8 sequence, that is: it has the same "core" amino acid sequence as the wild type bovine CXCL8 peptide but may also include "amino acid substitutions, additions and deletions that do not delete the CXCR1 and CXCR2 binding functions". In other words, a CXCL8 analogue that still retains antagonist activity. Locations within the bovine CXCL8 wild type sequences that would tolerate such "substitutions, additions and deletions" can be predicted either by comparison of the bovine CXCL8 sequence with CXCL8 amino acid sequences from other organisms (such an alignment has

been provided for the examiner's reference), wherein it is expected that for example amino acids that are not highly conserved across species may be substituted for other amino acids; or by consulting the three dimensional crystal structure of CXCL8 (also enclosed for the examiner's reference).

Thus, one of skill in the art would understand that the claims in question are directed to a peptide having the core sequence of the wild-type bovine CXCL8 sequence but having a deletion of the first two amino acids, Arginine at a position corresponding to residue 11 of the wild type sequence and Proline at a position corresponding to residue 31 of the wild type sequence and including additional modifications such as those discussed above and still functions as an antagonist. It is noted that an "antagonist" is understood to be a compound which competes with (or out-competes) the natural ligand for binding for example at a receptor. It is further noted that http://dictionary.reference.com defines an antagonist as:

> *Biochemistry. A chemical substance that interferes with the physiological action of another, especially by combining with and blocking its nerve receptor*

Thus, the use of the term "antagonist" indicates that the peptide retains CXCR1 and CXCR2 binding activity.

Thus, it is believed that it would be well within the ability of the skilled artisan, using for example the sequence comparison provided above to determine what other substitutions could be made to a core CXCL8 peptide having a deletion of the first two amino acids, arginine at residue 11 of the wild type sequence and proline at residue 31 of the wild type sequence.

Claim 80 was rejected under 35 USC 102(b) as anticipated by WO 97/00601.

It is believed that this objection is overcome by the arguments forwarded above. Specifically, it is noted that WO 97/00601 does not disclose an IL8 having the first two amino acids deleted, arginine at residue 11 or proline at residue 31.

a sign copy of the amdt
2

Further and more favorable consideration is respectfully requested.

Respectfully submitted

John R. Gordon

PER: _____
Michael R. Williams
Registration 45,333

April 15, 2005

Winnipeg, Manitoba, Canada
Telephone (204) 947-1429 - FAX (204) 942-5723